Handy Kinks *for* Car Owners

Strong Start on Weak Battery—Other Useful Hints

EASY starting for the automobile motor depends on the proper mixture of gasoline and air and on a strong, hot spark, assuming of course that the mechanical condition of the motor is good.

By pulling out the choke knob you can be sure that there will be plenty of gasoline in the mixture, and by using the arrangement shown in Fig. 1 you can get a stronger and hotter spark than normal, even though the storage battery is not fully charged.

A fixed resistance coil is connected in the circuit in series with the spark coil to limit the amount of current that will flow in the coil and prevent it from burning out if you accidentally leave the ignition switch turned on when the motor is not running. The idea is to connect a stop light switch as shown in Fig. 1 so that when the plunger of the switch is pulled out the resistance coil will be short-circuited. The plunger of the stop light switch is connected by means of a piece

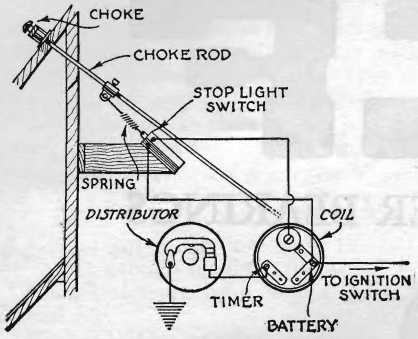

Fig. 1. Easy starting is insured by connecting a stop light switch with the choke button so that a resistance coil on the spark coil is short-circuited when the choke is out, giving a strong, hot spark

of wire and a spring to the choke rod, so that when you pull out the choke the resistance coil will be short-circuited and an abnormally large amount of current will flow through the spark coil, producing a fine spark even with the starting motor drawing a large amount of current from the battery. Pushing in the choke rod again after the motor starts restores the circuit to normal running condition.

Novel Ash Disposal

IF YOU have ever tried to knock the ashes from your cigarette or cigar by putting your hand out of the window and have had the ashes blown back into your face and all over the inside of the car, you will appreciate the ash disposal system detailed in Fig. 2. It consists, essentially, of a piece of one-inch flexible tubing such as is used in electric wiring. A flared nozzle

Fig. 2. A flexible tube placed as shown above will solve the driver's cigarette and cigar ash problem

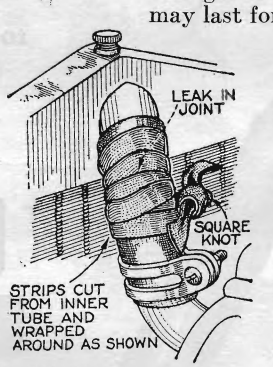

Fig. 3. Right: When the hose clamp breaks or the bolt strips, a piece of old inner tube makes a water-tight emergency repair

Ten Dollars for an Idea!

HARRY W. PETERSON, of Seattle, Wash., wins the $10 prize this month with his suggestion for overcoming battery weakness, shown in Fig. 1. Each month Popular Science Monthly awards $10, in addition to customary space rates, for the best suggestion for motorists sent in by a reader. Other published contributions are paid for at the usual rates.

is fastened to the top. Part of a small tin funnel will do nicely after the small end has been cut off. The lower end of the flexible tubing is passed through a hole in the floor boards and clamped by means of a sheet iron bracket with the open end pointing toward the rear of the car. The motion of the car will create a draft of air downward through the pipe to carry the ashes away.

It is desirable to locate the lower end of the pipe so the ashes will not get on the storage battery. A couple of coats of any dark brushing lacquer makes the tubing inconspicuous.

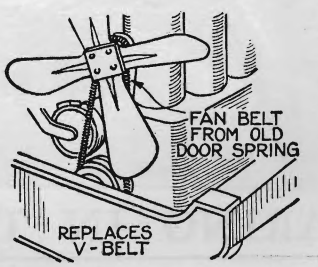

Fig. 4. An old screen door spring connected at the ends will operate the fan until you can replace a worn-out belt

Emergency Hose Repair

IF THE water-hose clamp-screw becomes stripped or the clamp cannot be tightened any more, you can make an emergency repair with a long strip of rubber cut from an old inner tube. Slide the clamp down out of the way and wind the strip of inner tube tight around the end of the hose and down onto the pipe. If the rubber is wound carefully and tight and the ends knotted as shown in Fig. 3, you will get a water-tight connection that may last for a long time.

Spring as Fan Belt

WHILE the only proper thing to do with a worn-out fan belt is to replace it with a new one, you can make a screen door spring serve in an emergency, as shown in Fig. 4. Two springs may be hooked together to take the place of a very long spring. Of course it is desirable to replace the spring belt with a regular leather belt at the earliest opportunity, as the spring belt will wear a groove in the pulley if used for any length of time and the groove will cause excessive wear on the new leather or composition rubber belt when you eventually fit it.

Round the Spring Edges

SOMETIMES springs will wear in such a way that the car will ride with a peculiar bumpy motion. This occurs when the shorter leaves are formed so that the edge gradually wears a section

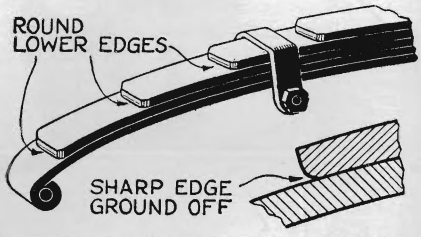

Fig. 5. Rounding the edge at the lower end of each leaf of the spring will prevent wearing away a depression in the leaf below and preserve smooth spring action even when riding ove large bumps

of the leaf below it. When the wheel strikes a bump slightly larger than normal the edge of the spring is forced to ride up over the corner of the depression worn in the lower spring. The cure for this is to round the sharp edge at the lower end of each leaf as shown in Fig. 5.